microörganisms. The method adopted was that of Wright and Douglas, as described in their several publications. A series of cases of cutaneous diseases (acne, furunculosis, etc.) due to staphylococcus and to tubercle bacilli (lupus, etc.) are given, the results of treatment being in many instances strikingly favorable. The authors express themselves with caution and professional modesty, but the result of several years' experimental work incline them to agree with Wright's estimate of the value of this method, who states that "we have, in the power of raising the antibacterial power with respect to any invading microbe, out of all comparison, the most valuable asset in medicine."

The Blood in Relation to Skin Diseases.—THOMAS HOUSTON and J. C. RANKIN, of Belfast (*Brit. Med. Jour.*, October 6, 1906), give the results of work done by them in which the blood, using Prof. A. E. Wright's methods of examination, gave important indications for treatment. One case, illustrative, may be quoted. The man had suffered for five years from staphylococcic lesions. It was found that his "opsonic" power was low, and that it could be raised by injections of staphylococcic vaccine, and that while his opsonic index was high the lesions always improved. He received seven or eight injections, which almost completely freed him from any cutaneous lesions, except a little persistent eczema on his wrists. Ten days' treatment with sodium lactate caused this to entirely disappear. After inoculations practically all the cases cited rapidly improved, though some relapsed; in a few the failure was obviously due to faulty procedure. The inoculation of the vaccine employed must be neither too large nor too small. Thus, in a case of acne with abscesses, inoculations with from 0.5 c.c. to 1.25 c.c. (used every day or every other day) of vaccine containing 1,200,000,000 dead staphylococci proved to be too large dosage, the curve of the opsonic index not being observed. In lupus if the opsonic index is persistently low the case will not do well with the Finsen light nor with any other treatment. If by carefully regulated inoculations, however, we raise the opsonic power, the improvement is marked. In those dermatoses associated with serous effusions, in which the coagulability of the blood is found diminished, the soluble salts of lime have been rapidly beneficial.

The Perborates in the Treatment of Diseases of the Skin.—HERXHEIMER and IPSEN (*Arch. f. Dermat. u. Syph.*, Band lxxxiii, Heft 1) report their experience with the use of the perborates of zinc, magnesium, and sodium in the treatment of various diseases of the skin. These are new preparations which contain considerable quantities of oxygen, which is slowly set free when in contact with the skin. The zinc perborate was employed in salves and pastes containing from 2 to 25 per cent. of the salt. A large number of cases was treated with these salves and pastes, chiefly eczema in various stages. The authors conclude that the chief indication for the use of the remedy is found in dry eczema with infiltration, it being contra-indicated in all acute forms of the disease, and in the weeping stage of the chronic forms. Trial was made of the magnesium perborate with the view of avoiding the irritation which sometimes followed the use of the zinc salt, but there was but little difference between the action of the two. The perborate of sodium was found too irritating in eczema, but was employed with good effect in acne as a kind of paste made by adding a handful of the salt to a half-liter of water and allowing it to stand a day before using. This salt was also found useful in the treatment of hyperidrosis.

The Action of Radium on Malignant Neoplasms.—W. DEANE BUTCHER (*Archives of the Röntgen Ray* No. 76) states that in his opinion the fact has been well established that small superficial neoplasms, such as lupus and cutaneous carcinoma, may be destroyed by the radiations of radium. "A wart, a lupous nodule, a syphilitic infiltration, a rodent ulcer, or a patch of carcinoma will simply wilt and wither away under the influence of the Becquerel rays, like an uprooted weed under the action of sunlight." Radium, like the Röntgen radiations, has a selective influence on young, immature, and rapidly growing tissue. It is difficult to explain the mechanism or to frame any reasonsable hypothesis which will account for this withering action of the ethereal waves on the elements of abnormal tissue. The first action of radium is apparently to cause a spasm of the bloodvessels, which may eventuate in permanent blanching of the part as in the treatment of nevi. Later there may be congestion, skin reaction, and still later telangiectasis, just as from an overdose of Röntgen rays. In short, the problems are the same as those of radiotherapy. Butcher thinks that a small, superficial, circumscribed lesion may be as accurately, certainly, and speedily attacked by radium as by Röntgen rays. It is by no means the case that the most powerful and costly specimens of radium are required for every case of radium therapy. Pigmentation of the skin has been known to follow exceedingly minute doses of the radium radiation. Wichmann, of Hamburg, found that pathological tissues, such as carcinoma, lupus, and fibroma, absorb a greater proportion of the rays than does healthy tissue. Radium succeeds in some cases when the Röntgen rays have failed to benefit. Even in the last stages of carcinoma, when ulcerative changes are rapidly spreading, one occasionally notes a marvellous arrest of the ulcerative process after exposure to the Becquerel rays, even in cases in which the Röntgen rays have proved of no value. Reference in the article is made to the recorded cases of Lassar, Robert Abbe, and MacKenzie Davidson in various diseases, especially carcinoma. The whole subject is full of interest and of promise.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

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On the Origin of Anthracosis of the Lungs.—Since the publication of the work of Calmette's pupils, Vanstenberghe and Grysez, upon the intestinal origin of pulmonary anthracosis, the conclusions which they